

Northern Area Plan Update

Existing Conditions Analysis, Corridor Study, and Land Use Report

Report Outline

The following report includes four major components:

1. **Executive Summary** (pages 2-4) – summarizes the key findings of the existing conditions analysis, corridor study, and land use analysis.
2. **Existing Conditions Analysis** (pages 5-16) -- discusses existing conditions and issues within the entire Northern Area Plan Update study area – hereafter referred to as the “study area.”
3. **Corridor Study** (pages 16-19) -- discusses key housing and community indicators in the Courthouse Road corridor (a subsection of the Northern Area Plan study area) and six other major road corridors throughout the county. Throughout this report “Courthouse Road Corridor” refers to properties located within ½ mile of Courthouse Road, between Hull Street Road and the Midlothian Turnpike.
4. **Land Use Analysis** (pages 19-27) -- discusses potential needs for residential, office, commercial and industrial land uses within the study area to the year 2023.

Report Purpose

This report is intended for use by citizens, county staff, and elected and appointed officials to highlight and understand existing and potential future land use planning issues affecting the study area. This information will provide a baseline of data for current and future planning efforts in the area. Ultimately, this information can help the planning process for this area to be informed and fact-based.

Data Sources and Notes

Unless noted otherwise, the following notes apply to all data contained in this report:

- Data is derived from Chesterfield County Planning Department, GIS, and Real Estate Assessor records.
- **Data applies to calendar year 2002** (the last full year of community indicator and land use database information available), unless noted otherwise.
- Percentages and numbers are rounded where appropriate.

Executive Summary: Study Area

This report discusses in detail a variety of potential land use issues affecting the study area. Each of the following issues was examined in context of the county as a whole. The report found that the study area was notably different than the county as a whole for each of the following issue areas.

Demographic Issues

- **Slow Growth:** The study area experienced a slow rate of population growth from 1992 to 2002. Study area population grew by about 1.6% per year, compared to the countywide rate of 2.5% per year.
- **High Income:** The study area has higher household income levels. Study area median household income was 106% of the countywide level in 2000.

Housing Issues

- **High Density:** The study area is high density, with more than four times the number of houses per acre (1.6 per acre) compared to the county as a whole (0.38 units per acre).
- **Older Housing:** Many houses in the study area are relatively old. The median age of single-family houses in the study area (22 years) is three years older than the countywide figure.
- **Larger Housing:** Many houses in the study area are relatively large. The median size of single-family houses in the study area (1,909 square feet) is over 100 square feet larger than the countywide figure (1,796 square feet).
- **Housing Prices:** Many houses recently sold in the study area had slightly lower sales prices compared to the county as a whole. The median sales price of single-family houses in the study area (\$145,000) was about three percent lower than the countywide median sales price (\$149,000).
- **Multi-Family Residential Development:** From 1993 through 2003, the rate of increase of multi-family housing (24%) was greater than the rate of increase of single-family housing (21%) in the study area.
- **High Assessment Increases:** Study area houses appear to be holding their value. From 1997 through 2002, the study area experienced a greater rate of single-family residential assessment increases (6.5% per year) compared to the county as a whole (5.2% per year).

Commercial, Office, and Industrial Development Issues

- **Limited Commercial Land Supply:** The commercial land supply in the study area would be sufficient for six years of commercial development, given recent development demands of 375,000 square feet of new commercial development per year.
- **Retail Center:** The study area is the retail heart of Chesterfield County -- almost two-thirds of the assessed commercial property value in the county is located in the study area.

- **Jobs/Employee Ratio:** There is a nearly equal number of jobs and employed persons living in the study area. However, more than half of the workers living in the study area worked outside of the county in the year 2000.
- **Primary Employment Center:** The study area is a primary county employment center, supplying 40% of all jobs in Chesterfield County.
- **Property Tax Generation:** The study area is a major property tax generator, supplying approximately 37% (or \$6.3 billion) of the taxable property value in the county.
- **Many Businesses:** The study area is home to 39% of county-licensed businesses.
- **Limited Industrial Development:** The study area has minimal amounts of existing industrial development (comprising only one percent of the study area). In addition, the study area has recently experienced low levels of industrial development, averaging about 25,000 square feet of new industrial building space per year.
- **Significant Industrial Land Supply:** The study area has a 285-year supply of land (based on recent development trends) that is either planned or zoned for industrial land uses.

Executive Summary: Courthouse Road Corridor

This analysis found that the Courthouse Road corridor (properties fronting Courthouse Road between Hull Street Road and Midlothian Turnpike, and properties within ½ mile of frontage properties) had important characteristics and distinctive issues in each of the following indicators studied:

Housing Issues

- **Low Density:** Frontage properties along Courthouse Road are relatively low density (0.33 units per acre).
- **Housing Mix:** Housing within ½ mile of Courthouse Road is predominately single-family residential (95%), while housing on frontage properties is only 49% single-family (reflecting a higher percentage of multi-family units).
- **Smaller Houses:** Houses fronting on Courthouse Road are typically smaller (1,473 square foot median size) than the surrounding area (1,628 square feet) and the county as a whole (1,796 square feet).
- **Turnover Rates:** Single-family residential turnover rates, the percentage of houses sold in a one-year period, on frontage properties (10%) and the larger corridor area (10.4%) are slightly higher than the county as a whole (8%).
- **Lower Owner-Occupancy / Higher Rental Rates:** Houses on the Courthouse Road frontage had lower owner-occupancy rates (77%) than the surrounding area (89%) and the county as whole (91%) – more single-family houses along the Courthouse Road frontage are renter-occupied.

- **Increasing Rental Occupancy:** Owner-occupancy rates along the Courthouse Road frontage are declining – 29% of houses sold from 1997 through 2002 are renter occupied, compared to 9% rental occupancy for recently sold houses in the surrounding Courthouse Road corridor area.
- **Assessment Increases:** Single-family residential assessment increases on Courthouse Road frontage properties (4.6% per year from 1998 through 2002) were lower than the surrounding area (5.4% per year) and the county as a whole (5.6% per year). However, assessment increases for Courthouse Road frontage properties (4.6% per year) were slightly higher than the average of seven corridors (4.2% per year).

Development Issues

- **Larger Parcels:** Single-family parcels fronting Courthouse Road are relatively large, with a median parcel size of about 40,400 square feet (almost an acre), compared to other corridors (25,500 square feet), the surrounding area (16,500 square feet), and the county as a whole (16,600 square feet).
- **Residential Development Potential:** Undeveloped frontage properties on Courthouse Road are not likely to be viable for significant additional single-family residential development, given current countywide trends towards larger subdivision development (with an average subdivision size of 58 acres). Larger subdivision development along Courthouse Road would generally require significant aggregation of smaller parcels.
- **Overall Development Potential:** Forty percent of frontage property along Courthouse Road is vacant or “under-improved.”* In comparison, only 32% of the surrounding area is vacant or “under-improved.” The average parcel size for vacant or under-improved frontage properties fronting Courthouse Road was 3.3 acres, compared to 2.4 acres for vacant and under-improved properties in the larger Courthouse Road corridor area.

* “Under-improved” property is defined in this report as properties where the assessed improved value is less than half of the total assessed property value.

Existing Conditions Analysis: Plan Overview

Plan Boundaries (Map A)

The study area of the Northern Area Plan Update is approximately 50 square miles in area (32,220 acres), which is approximately 11% of the total county area. Study area boundaries include Powhatan County in the northwest, Henrico County and the Bon Air Plan area in the North; the City of Richmond in the East; the Central Area Plan and Southern and Western Area Plan in the south; the Route 288 Corridor Plan, Midlothian Area Plan and Upper Swift Creek Plan to the West. A small portion of the Upper Swift Creek Plan that is physically separated by Route 288 Corridor Plan is included in the study area.

Magisterial Districts (Map B)

The study area incorporates parts of four magisterial districts:

District	% of the District in the Study Area	% of Study Area in the District
Clover Hill	64%	39%
Dale	2%	2%
Matoaca	1%	5%
Midlothian	64%	54%

Existing Plans (Map C)

The study area incorporates eight existing land use plans, and portions of three plans, as follows:

Plans Included in Study Area	Year Adopted	% of Study Area
<u>Northern Area Plan</u> (entire plan area)	1986	35%
<u>Powhite/Route 288 Development Area Plan</u> (entire plan area)	1985	22%
<u>Old Gun/Robious Area Plan</u> (entire plan area)	1994	20%
<u>Eastern Midlothian Plan</u> (entire plan area)	1998	8%
<u>Route 360 Corridor Plan</u> (entire plan area)	1995	6%
A portion <u>Upper Swift Creek Area Plan</u> physically separated by <u>Route 288 Corridor Plan</u> (3% of plan area)	1991	3%
<u>Huguenot/Robious/Midlothian Plan</u> (entire plan area)	1993	2%
<u>Jahnke/Chippenham Development Area Plan</u> (entire plan area)	1983	1%
A portion of <u>Midlothian Area Community Plan</u> east of Falling Creek (4% of plan area)	1989	1%
A portion of <u>Route 288 Corridor Plan</u> east of proposed Route 288 alignment (8% of plan area)	1999	1%
<u>Alverser/Old Buckingham Plan</u> (entire plan area)	1988	0.003%

Existing Conditions Analysis: Comprehensive Plan Principles

The Plan for Chesterfield incorporates guidelines that promote development patterns to facilitate the orderly, harmonious, predictable and efficient use of the county's limited (446.5 square miles) land and water resources. These guidelines apply to specific Plan areas of the county, and are outlined in the Introduction to the Plan for Chesterfield. They serve as the basis for the goals and recommendations of Plan amendments. In general, these guidelines include the following principles:

- Promote a reasonable approach to growth management
- Provide for economic development
- Shape the character of development
- Protect important cultural, historic and environmental resources
- Sustain healthy neighborhoods

Promote a reasonable approach to growth management: A countywide pattern of orderly development directs growth to appropriate locations within existing, developed areas, such as the study area, and encourages fringe development as an orderly extension of developed areas. The resulting growth pattern ensures efficient use of land by minimizing sprawl. An efficient land use pattern further promotes cost-effective use of existing public facilities by promoting infill development, and by encouraging economical extensions of public facilities by minimizing leapfrog development.

The Introduction to the Plan for Chesterfield development strategy designates most of the study area for Infill Development, as part of the county's commitment to promoting orderly growth and development patterns. Most study area land is already developed, yet opportunities still exist to encourage infill development and redevelopment. A small portion of the study area (containing approximately two square miles of land), located east of Route 288, north of the Midlothian Turnpike, is designated as a Planned Growth area. Most of this subarea is developed and/or zoned for development. About 490 acres of this subarea is vacant or minimally improved land.

Provide for economic development: Chesterfield County recognizes that business and real estate tax revenues generate a significant part of the resources needed to provide high quality services for its citizens. The county further recognizes that abundant employment opportunities close to home also benefit its citizens. In particular, industrial, office and other employment-generating uses provide tax revenues, which help defray the cost of providing services to county residents. By facilitating the development of such uses in appropriate locations, the county encourages the provision of quality services to its citizens without having to raise tax rates. In addition, such uses provide residents with jobs within the county and close to home, thereby reducing commuting distances, travel times, traffic congestion, air and water pollution, and transportation costs. This, in turn, enhances the quality of life for working citizens and their families.

The study area is a major county employment center. While the county as a whole has more employed persons than jobs, the study area has approximately the same number of jobs and employed persons. It is the dominant provider of retail, service, and finance, insurance, and real estate (FIRE) sector jobs in the county. Opportunities abound to maintain and improve existing office, commercial and industrial development in the study area. These efforts, in turn, should help preserve a significant part of the county's tax revenue base, and provide jobs for area residents. However, new office, commercial and industrial development should be guided in a manner that protects, natural, cultural and historic resources and nearby neighborhoods, and in way that enhances the quality of life in the study area.

Shape the character of development: The county recognizes that new construction and redevelopment should adhere to design guidelines to ensure that these uses have visual appeal when viewed from public places (such as roads). Design guidelines help to assure that new construction and redevelopment contributes to and improves the overall appearance and livability of the community. These efforts should ultimately make surrounding properties more desirable for development and existing residential areas more attractive places to live.

Conditions of past zoning approvals and Zoning Ordinance requirements regulate office, commercial and industrial development within the study area. The study area is subject to Post Development standards along Midlothian Turnpike, from the Richmond city limits to Alverser Drive, and along Hull Street Road from the Richmond city limits to just west of McKesson Drive. Remaining properties within the study area are subject to Emerging Growth development standards. Redevelopment or new construction must conform to applicable development standards. These standards address access, parking, landscaping, architectural treatment, setbacks, signs, buffers, utilities, and screening of dumpsters and loading areas. Route 360 Corridor Development Standards apply to new office, commercial and industrial development along Hull Street Road, between Chippenham Parkway and Courthouse Road. These standards address architectural design compatibility, new landscaping requirements, and additional setbacks along Route 360 to encourage the preservation of high-canopy and under-story trees.

Protect important environmental, cultural and historic resources: The James River abuts the northern edge of the study area and provides potential open space and outdoor recreational opportunities. The study area may contain significant cultural, historic, and visual resources in addition to those already identified in county inventories. Where possible, these resources should be identified and protected.

Sustain healthy neighborhoods: Preservation and maintenance of developed residential and commercial areas of the county forestalls decline and blight, and contributes to the overall health of the larger community. Properly maintained, these areas lend themselves to the creation of uniquely identifiable places, contribute to the variety of lifestyle choices available to citizens, provide affordable housing, optimize the use of existing infrastructure, and contribute to the countywide goal of minimizing suburban sprawl. The study area remains a desirable community in which to live and invest for the future. The pattern of development suggested by the Land Use Plan can, if properly implemented, contribute to overall community health as well as the health of existing and future neighborhoods.

Existing Conditions Analysis: Land Use and Zoning

Land Use (Map E)

Land use patterns within the study area are dominated by residential uses. Single-family residential land uses occupy approximately 55% of the total study area. Commercial land uses are mainly concentrated along major roadways, such as Midlothian Turnpike, Hull Street Road, Huguenot Road, and the Genito Road/Oak Lake Boulevard intersection. Commercial land uses comprise about nine percent of the study area, and provide 32% of the county's total commercial area. Significant public/semi-public uses in the study area include ten parks, 14 schools, five fire stations, and three volunteer rescue squads. Other semi-public uses include churches, golf courses, country clubs, and fraternal buildings.

Powwhite Parkway, Midlothian Turnpike, Hull Street Road and Robious Road provide major east/west vehicular access, linking the study area with the rest of the county to the west, Powhatan County to the north, and Henrico County and the City of Richmond to the east. Chippenham Parkway, Courthouse Road, and Route 288 provide major north/south vehicular access, linking the study area with the rest of the county. Upon completion of currently committed road improvements, Route 288 will also provide major vehicular access to Powhatan and Goochland Counties, and should improve access to the west side of Henrico County.

The James River runs along the north edge of the study area. The other significant waterway draining the study area is Falling Creek and its tributaries. These waterways have significant floodplains and Resource Protection Areas (RPAs).

Study Area Existing Land Use (Map E)

Existing Land Use	Study Area Acres	% of Study Area	Countywide Acres	Study Area % of County
Single Family Residential	15,622	55%	93,877	17%
Vacant	6,690	23%	140,485	5%
Public / Semi-Public	2,532	9%	19,550	13%
Commercial (inc. offices)	2,298	9%	7,054	32%
Multi Family Residential	605	2%	1,734	35%
Water (lakes, streams)	338	1%	4,675	7%
Industrial	206	1%	6,268	3%
Utility	131	1%	1,398	9%
Mobile Home	36	0%	373	10%
TOTAL	28,459	100%	275,422	10%

Study Area Existing Land Use Plan Designations (Map D)

Land Use Plan Designation	Study Area (acres)	% of Study Area	% of County	County (acres)	%
Residential	21,605	76%	14%	155,386	56%
Office/Mixed Use	1,757	6%	24%	7,450	3%
Industrial	1,634	6%	7%	23,959	9%
Public/Conservation/etc	1,253	4%	8%	16,699	6%
Commercial/Mixed use	1,209	4%	20%	6,047	2%
Regional Mixed Use	1,001	4%	21%	4,729	2%
Deferred Growth	0	0%	0%	61,152	22%
Total	28,459			275,422	

Zoning (Map F)

Most land in the study area is zoned residential. Pockets of agricultural zoning are located south of Midlothian Turnpike, and along Courthouse, Reams, Elkhart, and Turner Roads. Commercial and office zoning occurs mainly along Midlothian Turnpike, west Huguenot Road, and along Hull Street Road. Approximately 66% of the study area is zoned residential, of which 18% is vacant or has minimal improvement. Agricultural zoning accounts for 19% of the land in the study area, of which 33% is vacant or has minimal improvements. Fifteen percent of the study area is zoned for commercial, office, or industrial land uses.

Study Area Zoning and Development (Map F)

Zoning Designations	Acres	% of Study Area	% of Countywide Total	Developed Acres	Vacant / Minimally Improved Acres	% Vacant / Minimally Improved Acres
Residential	18,911	66%	21%	15,552	3,359	18%
Agricultural	5,414	19%	3%	3,606	1,808	33%
Commercial	2,348	8%	37%	1,723	625	27%
Industrial	1,007	4%	6%	395	612	61%
Office	779	3%	32%	493	286	37%
TOTAL	28,459	100%		21,769	6,690	24%

Existing Conditions Analysis: Study Area Conditions

Population Information

The following information comes from 1990 Census and 2000 Census data, the county land use database for 2002, and additional population and housing information gathered from Planning Department and county assessor records and studies.

Study Area Population Growth

Years	Study Area Population	% Increase	County Population	% Increase
1990 ^a	67,700	n/a	209,274	n/a
2000 ^a	76,700	13%	259,903	24%
1992 ^b	71,316	n/a	221,501	n/a
2002 ^b	82,942	16%	277,877	25%
2002-2012 ^c	91,317	10%	329,666	19%
2010-2022 ^c	95,642	5%	386,020	17%

Source: a) 1990 and 2000 Census data; b) Planning Department estimates; and c) Planning Department projections. Variation in 1992-2002 study area population estimates (compared to Census counts) is due to relatively smaller household sizes in the study area. This data is more reliable on a countywide basis.

1990 – 2000: Census data indicates that the study area population increased by 9,000 persons between 1990 and 2000, from 67,700 to 76,700 persons. This represents an average annual increase of 1.3%. Countywide population growth estimates for the same period indicate that the county as a whole grew by approximately 2.4% per year. The study area population estimate for 2000 represents approximately 30% of the total county population. Comparing these figures suggests that the study area population grew more slowly than the county as a whole, at approximately 60% of the overall county growth rate.

1992 – 2002: The 2002 population estimate for the study area is about 83,000 persons, which represents a 16% population increase from 1992 to 2002 (compared to a 25% increase in the county as a whole). Most population growth has occurred in newer subdivisions spread throughout the study area, indicating continued infill development. An estimated 9,200 persons lived in the Courthouse Road corridor in 2002. The 2002 study area population estimate represents approximately 30% of the county's estimated total population for that year. Although the study area has only approximately 11% of the total county area, the population density of the study area is 2.5 persons per acre, or more than twice the county as a whole (one person per acre).

2002 – 2012: The study area population is projected to increase by 10% from 2002 to 2012, compared to a projected 19% increase for county as a whole. Since most of the study area is developed, future population increases are expected to gradually decline as developable land becomes scarce.

Household Income

Census data for the year 2000 includes estimated median household income by census tract. Census tracts in the study area had a median household income of approximately \$62,000, or 106% of the countywide median (\$58,500). Household income in the study area increased approximately 29% from 1990 to 2000, compared to a 34% countywide increase. Census tracts in the Courthouse corridor had an estimated median household income of approximately \$59,000 in 2000.

Economic Information

Employment: In 2002, approximately 42,640 employed persons lived in the study area, or about 29% of the total employed persons residing in the county.

During 2002, study area businesses generated approximately 44,600 jobs (excluding government sector and school board jobs). This estimate equals approximately 40% of the total jobs in the county. The study area is a major county employment center, providing many jobs in the retail, health care, professional, and service sectors.

Study Area Employment Details by Job Category

Job Categories	Number of Jobs in Study Area	% of Countywide Total	Number of Jobs Countywide
Trade-Retail	10,608	60%	17,779
Accommodation & Food Services	4,255	49%	8,622
Health Care	4,183	51%	8,133
Administrative & Waste Services	4,129	52%	7,951
Finance & Insurance	3,726	66%	5,641
Construction	3,284	36%	9,236
Professional & Technical Services	2,255	53%	4,246
Information	2,069	71%	2,908
Management of Companies	1,647	77%	2,128
Other Services	1,592	44%	3,580
Manufacturing	1,547	13%	11,592
Trade-Wholesale	1,359	37%	3,632
Public Administration	1,322	18%	7,309
Arts, Entertainment & Recreation	1,060	43%	2,447
Real Estate	796	47%	1,689
Educational Services	379	4%	9,058
Transportation	242	6%	4,171
Agriculture	108	45%	238
Mining	47	70%	67
Utilities	0	n/a	674
TOTAL	44,608	40%	111,101

Source: Virginia Employment Commission (2nd Qtr of 2002). Government sector and School Board jobs are counted by the main office address for each entity – not for satellite locations such as schools, libraries, or fire stations. For this reason, the actual number of study area jobs is higher than the above figures indicate.

According to 2000 Census data, 44% of study area workers had jobs in Chesterfield County, while more than half had jobs outside of the county. This data reflects the regional nature of the job market, and that many jobs in the study area are held by workers who live outside of the study area and/or the county.

Tax Revenue: It is difficult to obtain information about tax revenue generated for specific geographies of the county. However, a review of county assessment data for land and improvement values (less exempt properties) suggests that the study area accounts for approximately 37% (\$6.3 billion) of total countywide taxable land value (\$17 billion). At current tax rates (\$1.07 per \$100 of assessed valuation), the study area generates an estimated \$67.4 million in property tax revenue. The study area generates an estimated \$813 in property tax revenue per capita, compared to \$587 per capita for the remainder of the county. Estimated property tax revenues in the study area, on a per capita basis, are 38% higher than the rest of the county. A further analysis of assessment records suggests that approximately 49% of the county's assessed value for all commercial and industrial improvements (exclusive of land value) is located in the study area. An estimated 61% of the assessed value of all commercial development in the county is located in the study area (even though this area comprises only 11% of the county land area and 30% of the county population).

Business Licenses: The study area has a high concentration of county businesses. In 2002, 5,559 business licenses, or 39% of the total number of business licenses countywide, were issued to businesses located in the study area. Throughout the county during the same time period, about two-thirds of all business licenses were issued to residential addresses (home-based businesses). In the study area, about half of all business licenses (2,697 out of 5,559 business licenses) were issued to home-based businesses. Compared to the rest of the county, the study area had a slightly lower percentage of home-based businesses (perhaps reflecting the fact that there is a higher number and concentration of traditional business operated outside of the home).

Environmental Issues (Map G)

Waterways: The study area includes the following waterways: James River, Falling Creek, Powwhite Creek, Pocoshock Creek, Nuttree Branch, Michaux Creek, and Roberts Branch. These waterways have floodplains and Resource Protection Areas (encompassing approximately eight percent of the study area) identified on the Water Quality Protection Plan as environmentally sensitive areas. Approximately 20% of county wetlands are located in the study area. Additional floodplains and wetlands that are not formally designated may also exist in the study area. Further analysis of these features should occur with new development.

Topography: The study area is generally characterized by flat to gently rolling topography. Significant slopes and erodable soil conditions may exist along rivers and streams. The estimated average elevation of the study area is 250 feet above sea level. Elevations in the study area range from 65 feet above sea level (at the bottom of the man-made, Martin Marietta Quarry at Route 360) to 390 feet above sea level (in the Robious/Old Gun Road West area). The Robious/Huguenot Road area is located on a higher plateau, while areas around Bon Air, Hull Street Road, and the James River are generally lower in elevation.

Housing

The study area has a wide variety and age of housing types. The following table provides a summary of housing statistics in the study area, the entire county, and the Courthouse Road corridor.

Study Area Housing Statistics

Housing	Year(s)	Measure	Courthouse Corridor	Study Area	Countywide
Total Housing Units	2002	Number	4,029	30,868	103,902
SFR Units	2002	Number	3,370	25,332	86,144
MFR Units	2002	Number	659	5,536	16,123
Housing Density	2002	Units/Acre	0.90	1.6	0.38
Owner-Occupied SFR Units	2002	% of All Units	89%	92%	91%
Renter-Occupied SFR Units	2002	% of All Units	11%	8%	9%
Median Age of SFR Units	2002	Years	21	22	19
Median SFR Unit Size	2002	Square Feet	1,628	1,909	1,796
SFR Turnover (units sold)	2002	% of All Units	10.4%	8.4%	8%
SFR Maintenance and Reinvestment	2002	\$ / Unit	\$274	253	230

Housing	Year(s)	Measure	Courthouse Corridor	Study Area	Countywide
Residential Code Complaints	2002	Per Capita	0.0090	0.0075	0.0115
SFR Growth	2002	% Increase	2.3%	1.6%	3%
MFR Growth	2002	% Increase	0%	0.9%	6%
Overall Housing Growth	2002	% Increase	1.7%	1.1%	3%
Overall SFR Sales Prices	2002	\$ Median	\$139,000	\$145,500	\$149,000
New SFR Sales Prices	2002	\$ Median	\$182,660	\$201,000	\$197,000
Resale SFR Sales Prices	2002	\$ Median	\$120,250	\$139,000	\$135,000
New vs. Resale SFR Prices	2002	% Difference	52%	45%	32%
SFR Assessment Trends	1997-2002	% Increase	5.4%	6.5%	5.2%
SFR Assessment Trend	2001-2002	% Increase	12.1%	13.4%	11.9%

SFR = single-family residential. MFR = multi-family residential.

Public Facilities

Fire/EMS: Eight Fire and Emergency Medical Service (EMS) facilities are currently located in the study area:

- Bon Air (Station 4)
- Buford (Station 9)
- Manchester (Station 2)
- Wagstaff (Station 10)
- Reams (under construction)
- Forest View 2 and 3, and Manchester 1 Volunteer Rescue Squads

Other Fire/EMS stations located near the study area serve the vicinity, including the Midlothian Station (#5, no ambulance service) and the Swift Creek Station (#16). Most of the study area is within the Fire/EMS Department urban corridor service area. This corridor forms the basis for Fire/EMS response standards. The current service goal is to respond to 90% of Priority 1 Fire/EMS calls for service in the Urban Corridor within six minutes or less. In 2002, the countywide response rate for Priority 1 urban corridor calls within six minutes or less was 43%. For the study area, this rate was slightly better (45%), reflecting an established road network, the number of existing fire/rescue stations in the study area, and smaller service areas. The Courthouse corridor had a response rate of 43%, reflecting a service coverage gap in the vicinity of Courthouse and Reams road.

In 2002, the countywide Fire/EMS call rate was 0.099 calls per capita. The study area call rate was slightly lower (0.090 calls per capita). The Courthouse Road corridor rate was higher (0.134 calls per capita), reflecting increased call rates normally associated with commercial areas (such as Hull Street and Midlothian Turnpike) and major roadways.

The Public Facilities Plan (2004) identified that three parts of the study area have high call levels located beyond the service area of existing fire and rescue stations (measured by four minute driving distance): the north Salisbury area, the north Bon Air area, and the Courthouse/Lucks Lane/Smoketree area. The Public Facilities Plan recommends construction of one new fire station in the west Salisbury area, and expansion of two existing fire stations (Manchester and Midlothian) within the study area.

Libraries: LaPrade Library is located in the study area, and the Bon Air and Midlothian libraries are located near the service area. An estimated 99% of the study area is within ten-minute driving time of one or more existing library branches. In 2002, county areas north of Hull Street Road were about 18,000 square feet short of library space (based on the current level of service standard of 0.6 square feet of library space per capita). The Public Facilities Plan recommends construction of two new libraries within the study area, one in the Reams/Gordon area, and the other in the Robious/Huguenot area.

Parks and Recreation: The study area has ten county parks, providing 467 acres of parkland. This represents 12% of total county parkland. The study area has one regional park (Rockwood), four community parks (Huguenot, Providence Athletic, Robious Athletic, and Warbro), and four neighborhood parks (Davis Athletic, Greenfield Athletic, Manchester Middle School Athletic, and Monacan High School Athletic). The study area is approximately 196 acres short of the eight acres per 1,000 person parkland standard identified in the Parks and Recreation Master Plan. The Master Plan identified park needs throughout the county, and noted a particular need for a regional park (to be substituted with three community parks, due to lack of large undeveloped parcels in the area) and eight additional neighborhood parks in the north part of the county.

Police Services: Four county police facilities are located in the study area: Midlothian District Station, Chesterfield Towne Center Community Policing Office, Cloverleaf Mall Community Policing Office, and the Clover Hill Police Support Facility. Uniform (patrol) operations serving the study area are headquartered at the Midlothian Station. A long-term need for a west county district station has been identified by the Police Department, to improve service in the west part of the county (especially in the Hull Street corridor). In 2002 the county and the study area had 0.5 police calls per capita. The Courthouse Road corridor had 1.9 police calls per capita, reflecting higher call rates associated with commercial areas (at the intersections of Courthouse Road with Hull Street and the Midlothian Turnpike) and major roadways.

The standard county measurement for crime is the "Group A" crime incident rate. Group A crime incidents consist of three major crime categories: violent, property, and quality of life crimes. The countywide Group A crime incident rate was 0.06 per capita in 2002. Smaller area crime incident data is available only at the community level, for each of the 25 communities tracked by the yearly Chesterfield Communities Report. Generally, crime rates were higher than average near major commercial areas, in study area communities such as Belmont, Genito, Manchester, and Reams. Crime rates were lower than average in predominately residential study area communities, including Bon Air, Gordon, Midlothian, Rockwood, and Salisbury.

Schools: Fourteen Chesterfield County public schools are located in the study area:

Elementary Schools: A. M. Davis, Bettie Weaver, Crestwood, Evergreen, Gordon, Greenfield, Providence, Reams Road, and Robious. In Fall 2003, these schools had capacity for 6,284 students and enrollment of 5,482 students (87% of capacity).

Middle Schools: Manchester, Providence, and Robious. In Fall 2003, these schools had capacity for 3,562 students and had enrollment of 3,613 students (101% of capacity).

High Schools: James River and Monacan. In Fall 2003, these schools had capacity for 3,692 students and enrollment of 3,569 students (97% of capacity).

As of September 30, 2002, approximately 13,900 CCPS students lived in the study area. This represents approximately 16.7% of the total study area population, compared to countywide CCPS enrollment of 19.2% of the total county population. Compared to the county as a whole, the study area has a slightly older median age (hence fewer children live in the study area), and is more conveniently located to private school options.

The Public Facilities Plan recommends construction of one new middle school in the Courthouse Road/Powhite area, and one new high school in the northeast part of the county.

Transportation

An extensive transportation network identified in the Thoroughfare Plan serves the study area. This network includes Powhite Parkway and Route 288 (limited access roads); Midlothian Turnpike, Hull Street Road, Courthouse Road, Huguenot Road and Robious Road (major arterial roads). The current Thoroughfare Plan identifies missing links of arterials and collector roads within the study area. The status of existing roads, as well as the need for additional roads, may be examined through subsequent review and revisions of the Thoroughfare Plan.

Utilities

Public Water: The study area is well served by an extensive water distribution system. Most undeveloped sites are in close proximity to existing water lines. Other sites may require short line extensions. Generally, water pressure and line capacity in the study area are adequate; however, some types of development may necessitate the need for system improvements and/or interconnection of lines. Existing and planned improvements in the study area should adequately address the water needs of anticipated future development.

Public Wastewater: The study area is well served by an extensive wastewater collection system. While most residential areas are served by the public water system, original sections of some of older neighborhoods, such as Salisbury, Stonehenge, and Bexley, do not have public wastewater service. Existing and planned improvements should adequately address the wastewater needs of anticipated development in the study area for the foreseeable future.

Storm Water Drainage: Most of the study area, mainly near the Midlothian Turnpike, is well served by an extensive storm water drainage system. Existing and planned improvements should adequately address the storm water needs of anticipated development for the foreseeable future.

Historic and Cultural Resources

The study area is bordered by two 19th Century Chesterfield County settlements, Midlothian and Bon Air. A detailed assessment of the study area has identified at least 68 historic sites, including 18th and 19th Century homes, farms, churches, schools, taverns and manufactory sites that are of possible historic and cultural significance. In addition to the historic sites, there are approximately 12 former coalmines identified within the study area. Twenty-two former coalmines about the study area in the Midlothian Village area. Criteria for determining which structures and sites should be identified and/or preserved are being developed as part of an on-going county project to inventory historic and cultural resources.

Existing Conditions Analysis: Development Issues

Existing Development Patterns (Map E)

Residential Land Uses: Fifty-seven percent (16,263 acres) of land in the study area is developed with residential land uses, characterized primarily by single-family and townhouse residences in subdivisions, single-family residences on acreage parcels, and by apartments and condominiums in multi-family complexes. Single-family residences on acreage parcels in the study area are located mostly along arterial roads, including Courthouse, Reams, Providence and Turner Roads. Single-family and townhouse residences in subdivisions include a mix of older and newer neighborhoods. Most new single-family subdivisions are extensions of existing neighborhoods, spread throughout the study area. Several multi-family complexes are located within the study area, primarily along Hull Street Road, Midlothian Turnpike, the Robious/Huguenot area and along Old Bon Air Road.

Study Area Housing Types and Percentages

Housing Mix	Courthouse Corridor		Study Area		Countywide	
	Total	% of Total Units	Total	% of Total Units	Total	% of Total Units
SFR Units	3,370	84%	25,332	82%	86,144	83%
In subdivisions	3,067	76%	22,367	73%	72,334	70%
Not in subdivisions	303	8%	2,965	10%	13,810	13%
Mobile Homes in Mobile Home Parks	0	0%	278	1%	2,167	2%
MFR Units (Total)	659	16%	5,536	16%	16,123	16%
Apartment Units	657	16%	3,911	13%	12,225	12%
Condominiums	0	0%	652	2%	1,145	1%
Townhouses	0	0%	903	3%	2,221	2%
Duplexes	2	0%	70	0%	532	1%
Total Units	4,029	n/a	30,868	n/a	103,902	n/a

Vacant Properties: Twenty-three percent (6,690 acres) of land in the study area is vacant or minimally improved according to assessor land use records. About two-thirds of vacant study area land is located west of Courthouse Road, in areas such as the RVG project (located between Robious Road and the James River), and in the light industrial area bordered by Route 288, Powhite Parkway, Genito Road, and Hull Street Road. The average parcel size of vacant land in the study area is about 2.7 acres. One hundred nineteen vacant study area parcels are at least 10 acres in size. About 53% of vacant parcels in the study area are located outside of subdivisions.

Commercial Land Uses: Nine percent (2,298 acres) of land in the study area is developed with commercial land uses. At the end of 2002, there was an estimated 12.2 million square feet of existing commercial building area. The commercial development pattern in the study area is dominated by linear development along major arterials (Midlothian Turnpike, Hull Street Road, Huguenot Road, and Robious Road). A major regional commercial center is located at the Midlothian Turnpike, Courthouse Road and Huguenot Road intersection.

Public/Semi-Public Land Uses: Nine percent (2,532 acres) of land in the study area is developed with public and semi-public land uses (e.g. parks, schools, etc.). Public and semi-public uses are distributed throughout the study area. The largest single public use in the study area is the Bon Air Juvenile Correctional Facility, located in the Old Bon Air/Rockaway Road area. A small part of the site (about 65 acres of the 407-acre site) is developed. The undeveloped remainder contains steep slopes and a former landfill.

Other Land Uses: Industrial, utility, and water land uses each comprise one percent of study area land uses.

Development Constraints

More than 75% of the study area has been developed. The development pattern suggests the desirability of the study area as a place to live, work, and raise families. The current Plans, together with the observed trends, suggests that this part of the county will continue to grow as a residential community, with jobs and services becoming more available along major transportation networks. Potential development constraints in the study area include:

- Floodplains along the James River and Falling Creek (which may limit access and/or the ability to develop some properties)
- Access restrictions (proximity to roads, easements, etc.)
- Difficulty in property aggregation
- Slope/topographical difficulties

- Proximity/availability of public services (water, sewer)
- Market forces, including supply of more readily developable properties elsewhere
- Localized opposition to infill development projects

With the exception of floodplains and RPAs, the study area has no significant environmental constraints that cannot be addressed on a site-by-site basis as development occurs. Floodplains may present opportunities for natural boundaries between incompatible uses, open space, and passive recreational facilities.

Corridor Analysis: Purpose of This Analysis

The future of land use in the Courthouse Road corridor has been identified as one of the key issues for the Northern Area Plan update. To better understand the issues and challenges facing this corridor, this report includes data covering a series of community indicators for seven major road corridors countywide (including the Courthouse Road corridor). This approach helps to identify issues that are common to major road corridors in the county, and issues that particularly apply to the Courthouse Road corridor. This section considered properties with frontage on seven major arterial roads (Courthouse, Genito, Huguenot, Route 360, River Road, Route 10, and Turner), properties within ½ mile of each of these roads, and countywide indicators for each measure for comparative purposes. Certain indicators, such as single-family house sales prices, are not included in this analysis. The small size of data sets applying to corridor frontage properties decreased the statistical validity of some indicators, which were excluded from this analysis.

Corridor Analysis: Findings

Parcel Size (*For parcels with single-family residential land uses*): The median parcel size of single-family residential land uses can help assess the extent to which an area has been developed. Areas with smaller parcels are typically more built out than areas with larger parcels, since larger parcels tend to be vacant or under-improved. The median parcel size of corridor frontage parcels is approximately 25,500 square feet, compared to 15,200 square feet for parcels within ½ mile of corridors and 16,600 square feet for parcels countywide. Courthouse Road corridor frontage parcels have a median size of almost an acre, and are relatively large compared to other corridors. This suggests that frontage parcels on corridors in general, and along Courthouse Road in specific, may have been passed over for development of smaller lot residential land uses.

Most new residential development in the county is occurring mostly in larger subdivisions, such as Greensprings, Southern Land, and Charter Colony. At the end of 2002, the average project size of tentative subdivisions countywide was 58 acres. It is not likely that the relatively small vacant and under-improved parcels along Courthouse Road (averaging 3.3 acres in size) would be viable for significant additional single-family residential development, given current development trends in the county trending towards large site “greenfield” development. Such development would require significant land aggregation of smaller parcels.

Vacant/Minimally Improved Parcels (*Parcels with land use code of “vacant”*): The percentage of vacant and/or minimally improved parcels in an area is a good indicator of the extent of existing development and future development potential. About one out of four (26%) corridor-fronting parcels is vacant. Properties within ½ mile of corridors tended to be more developed: only nine percent of these parcels are vacant. Compared to other corridors, Courthouse Road is equally developed along frontage properties (26% of frontage properties are vacant) and slightly less developed within ½ mile (10% of properties are vacant).

Density (*Dwelling units per gross acre*): Density is a standard measure of the intensity of residential development. Areas with more housing units per acre are higher density and more intensely developed. Corridor frontage properties typically have a density of 0.27 units per gross acre. Properties within ½ mile of corridors have higher density (0.69 units per gross acre), reflecting the close-in development pattern for subdivisions near major arterial roads. Courthouse Road frontage properties are comparatively low density, with only 0.33 units per gross acre.

Housing Mix (*Types of dwelling units*): This analysis considered three housing types: single-family residential, multi-family residential (including apartments, townhouses, condos and duplexes), and mobile homes. This indicator depicts the balance of housing choices.

- **Single-Family Residential:** This study found that frontage properties in the seven corridors studied have a lower percentage of single-family units (35%), compared to properties within ½ mile of corridors (72%), and countywide (82%). This may be the result of homebuyer preference for quieter living environments away from major arterial roads, subdivision development that is typically separated from major roads, zoning patterns, and county planning efforts which encourage multi-family development near major roads. About half of housing units on Courthouse Road frontage properties, and most corridor properties (95%) are single-family residential.
- **Multi-Family Residential:** More than half (56%) of housing units on corridor frontage properties (in the seven corridors studied) are multi-family. Within ½ mile of major corridors, this percentage is lower (26%), and is even lower countywide (16%). Fifty-one percent of housing units on the Courthouse Road frontage are multi-family. However, there is only one apartment complex with frontage property (the Rockwood Apartments, with 132 units). Housing in the larger corridor area has a low percentage of multi-family units, equal to the countywide figure (16%).
- **Mobile Homes:** Major corridors studied, except for Route 10, have no mobile home parks. The high percentage of mobile homes along Route 10 skews the percentage figure for mobiles homes along all corridor-fronting properties. Properties within ½ mile of major corridors have an equivalent percentage of mobile homes (2%) compared to the county as whole. Mobile homes are not a significant development feature in the Courthouse Road corridor, either on frontage properties or in the surrounding area.

Housing Age (*Median year of single-family house construction*): Housing age is one measure to show when certain areas were developed, and may illustrate potential needs for housing maintenance and renovation. Houses on corridor frontage properties tend to be older than surrounding areas and the county as a whole. The median year of construction is 1964 for houses on corridor frontage properties, 1980 for properties within ½ mile of major corridors, and 1983 for houses countywide. Houses in the Courthouse Road corridor are slightly newer than other corridors, and slightly older than the county as a whole.

House Size (*Median square footage of single-family houses*): Typical housing sizes in an area may indicate rental activity. In many areas, past research (Chesterfield Communities Report) has found that communities with a predominance of smaller houses have higher rental occupancy rates. More recent research based on sampled assessment records indicates that countywide, smaller houses (less than the countywide median house size of 1,796 square feet) have lower owner occupancy rates (approximately 83%, compared to the overall county owner occupancy rate of 91%), and have higher rental occupancy.

The median size of houses on corridor frontage properties is 1,500 square feet (296 square feet smaller than the countywide figure), and 1,660 square feet for houses located within ½ mile of corridors (136 square feet smaller than the countywide figure). There is general relationship between housing age and size: newer houses tend to be larger than older houses (due to a variety of market and social conditions affecting new house construction). Housing on or near major corridors tends to be smaller because it is generally older. Houses fronting Courthouse Road tend to be slightly smaller (1,473 square feet) compared to other corridors, the surrounding area, and the county as a whole.

Residential Turnover (*Percentage of single-family houses sold within one year*): Residential turnover is a key indicator of community stability. Areas with higher property turnover typically have more transient populations and may experience greater assessment volatility. Eight percent of houses countywide changed ownership in 2002. The turnover rate was slightly higher (9%) for properties within ½ mile of major corridors, and slightly lower (6%) for properties fronting major corridors. Properties fronting and within ½ mile of Courthouse Road had slightly higher than average turnover rates (approximately 10% each).

Owner-Occupancy (*Percentage of owner-occupied single-family houses*): Owner occupancy of single-family homes is a positive indicator of the stability of a community. Homeowners tend to have a greater stake in the long-term health of their neighborhoods and a higher level of commitment to property maintenance.

In contrast, areas with high rental occupancy may experience greater resident turnover, deferred property maintenance, and less community involvement. Ninety-one percent of single-family houses in the county were owner-occupied in 2002 (*measured by whether a property owner address matches the site address of a property*). Properties located within ½ mile of major corridors had slightly lower owner-occupancy rates (88%). Frontage properties along corridors had lower owner-occupancy rates (72%). Properties within ½ mile of Courthouse Road had slightly higher owner-occupancy rates (89%) compared to the average for all corridors studied. Single-family houses fronting Courthouse Road had an owner-occupancy rate of 77%, which was higher than the average of other corridor frontage properties studied.

Owner occupancy of single-family houses fronting major corridors was lower for recently sold houses (from 1997 through 2002), suggesting a possible trend towards higher rental occupancy in these areas. Seventy percent of corridor fronting single-family houses sold recently were owner occupied (compared to 72% owner occupancy for all single-family houses along major corridors). The owner occupancy rate of recently sold houses fronting Courthouse Road was lower (71%) than the average (66%) for surrounding area properties, suggesting an increasing trend towards rental occupancy for houses fronting Courthouse Road.

Residential Code Enforcement (Complaints per capita): Chesterfield County Code Compliance staff processed approximately 3,200 code complaints for residential properties in 2002. These complaints included zoning violations, illegal signs, property nuisances and unlicensed vehicles. The countywide residential code enforcement rate was 0.012 complaints per capita, or one complaint for every 87 residents. This indicator is one measure of the extent to which property owners maintain their property, and may be influenced by active enforcement efforts in certain areas. Properties along and within ½ mile of the study corridors had a slightly lower overall residential code enforcement complaint rate compared to the county as a whole. Properties within ½ mile of Courthouse Road had slightly lower complaint rates (0.009 per capita) compared to other corridors (0.011 per capita), and properties fronting Courthouse Road had higher complaint rates (0.015 per capita) compared to other corridor frontage properties (0.014 per capita). Caution should be used in interpreting this data for two reasons. First, higher complaint rates along major corridors may be due in large part to the higher visibility of these properties, which makes them seen by greater numbers of passers-by. Second, the relatively small data sample makes the data less reliable for small geographic areas (i.e. the sample is too small to be statistically valid).

Police Calls (per capita): Police calls for service include every call that is made to the Police Department, including 911 hang-up calls. This indicator offers information about how often a community is using Police Department services, and can help determine the cost of serving a community. In 2002, the countywide number of police calls for service was about 0.5 calls per capita. Police calls for service are generally higher in areas with greater amounts of commercial development (due to higher traffic levels and predominance of property-related crimes associated with businesses).

Properties within ½ mile of major corridors had lower than average police call rates (0.29 calls per capita) than the county as a whole. Properties fronting major corridors had much higher than average call rates (1.15 calls per capita) due to reasons discussed above. The Courthouse Road corridor had higher than average call for frontage properties (1.14 calls per capita). If police calls for commercial properties at the Courthouse/Hull Street and the Courthouse/Midlothian Turnpike intersections are excluded from these figures, the call rate would be much lower (0.63 calls per capita) for frontage properties.

Maintenance and Reinvestment (average building permit value for renovations and additions for single family houses divided by the number of houses): In healthy communities, residents maintain and reinvest in their properties. Owners of houses renovate aging homes to add new amenities. Aging communities that have low rates of reinvestment may experience decline over time. Older homes that are not renovated may decline in value as buyers look to communities with newer homes and better maintenance. The countywide average building permit value for maintenance and reinvestment in 2002 was \$230 per house.

Properties within ½ mile of major corridors had higher per-unit average building permit values for maintenance and reinvestment (\$284/unit) compared to the county as a whole. Frontage properties on major corridors had lower permit values (\$212/unit).

Properties with ½ mile of Courthouse Road had per unit permit values (\$274/unit) nearly equal to the county as a whole. Properties fronting Courthouse Road had low per unit permit values (\$31/unit), due largely to the small data set involved (*only one building permit for renovation or additions was issued for all single-family houses fronting the corridor in 2002*).

Vacant and Under-Improved Land (*% of acreage with assessed improvement values of less than 50% of total assessed property values*): One method to assess the future development potential of an area is to examine how much land is vacant or under-improved – properties where the land itself is worth more than the built improvements on the land. This indicator not only measures vacant and minimally improved land (previously discussed, above), but also includes the additional development potential of certain properties with existing improvement value. An example of this situation would be a single-family house on a larger acreage parcel, where the value of the existing house is significantly less than the value of the underlying land. Areas with a large amount of vacant and under-improved land may have greater future development potential, subject to other variables affecting development feasibility (such as zoning, access, proximity to infrastructure, topography, and resource protection areas).

Sixty-five percent of the land area countywide is vacant or under-improved. Properties within ½ mile of major corridors are more highly developed: 48% of the land area is vacant or under-improved. Sixty-one percent of frontage properties along major corridors are vacant or under-improved. Courthouse Road is more developed than the average of seven corridors studied. Thirty-two percent of the land area within ½ mile of Courthouse Road is vacant or under-improved. Forty percent of the land area fronting Courthouse Road – 82 parcels totaling 315 acres -- is vacant or under-improved.

Assessment Trends (*% change in average single-family residential assessments: 1998-2002*): Real estate assessments are the best available source for information about the rate of change of housing values (often triggered by high sales activity) in each community. Assessment trends are also an important measure of community well-being and/or the volume of recent residential sales (since properties are reassessed after a property sale). The question of whether average assessments are rising or declining over time is important to most homeowners. Real estate assessments are based on the county assessor's determination of the fair market value of single-family homes. Assessment estimates of home values are not always consistent with actual market values, and vary yearly depending on a variety of factors. In general, members of the real estate community estimate that assessments tend to be within 10% of market value.

Single-family residential assessments increased by 5.6% per year, on average, countywide from 1998 through 2002. For houses located within ½ mile of major corridors, the average increase was slightly lower (5.3% per year). For houses located on corridor frontage properties, the average increase was lower (4.2% per year). For properties within ½ mile of Courthouse Road, assessments increased an average of 5.4% per year. For properties fronting Courthouse Road, assessments increased 4.6%.

Land Use Analysis: Purpose of This Analysis

This analysis attempts to anticipate the generalized need for residential, office, commercial and industrial land within the study area to the year 2023, based on estimated potential market demand and community-wide land use planning practices. The scope of this analysis is limited to land use, and therefore is not intended to include the level of detail associated with a market analysis. This section does not consider factors such as market demand, carrying capacity, market share, effects of income on the viability/need of particular retail land uses, etc. Discussion of retail trade areas is provided only to illustrate the balance and distribution of basic retail shopping center categories.

Real estate professionals often analyze potential uses for property based on the principle of “highest and best use”, a term often defined as “*the legal use of a parcel of land which, when capitalized, will generate the greatest net present value of income.*” Implied in this term is the notion that market forces (supply, demand, competition, etc.) can best determine how land should be used. However, “highest and best use” is only one principle that applies to land use analysis.

Another, equally important principle is “most appropriate use,” which, borrowing from the Code of Virginia, may be defined as *“a coordinated, adjusted and harmonious development of lands within a jurisdiction which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of that jurisdiction’s citizens.”* Consideration of both principles is appropriate for this analysis.

This analysis makes no attempt to determine the current or short-term marketability of any one parcel for any one use. Rather, it attempts to anticipate future needs for broad categories of uses throughout the study area for the next 20 years. In addition, this analysis does not attempt to suggest the specific relationships of these uses to one another within the study area, or within the wider community. These relationships are best determined by means of a Comprehensive Plan amendment. Private market forces (availability and price of land, location, character and age of competing businesses, site specific characteristics such as topography and visibility from roads, etc.) would decide the desirability of a specific use on one parcel over another, as well as the timing for developing such use, based on the principle of “highest and best use.” The zoning process also helps determine the appropriateness of such use on a case-by-case basis, by applying the guidelines for desirable land use development patterns as outlined in the Plan.

Demand for additional or differently located land in any zoning classification or land use category (especially demand projected 20 years into the future), is influenced by many factors, some of which are hard to quantify or predict. In addition, limitations on the types and quality of readily available data, together with differing opinions on the significance of this data and how best to analyze, interpret and use it, further complicate the task of predicting future land use needs. For these reasons, this analysis must be viewed as only one of many tools that may be used to craft a land use plan amendment for the Northern Area Plan study area.

Land Use Analysis: Summary of Findings

A review of zoning, subdivision and site plan activity between January 1993 and October 2003 suggests that future development demands within the study area will be primarily for residential and commercial land uses. The study area is projected to have nominal demand for new office and industrial land uses. The study area population growth rate between January 1993 and December 2002 was slower than the county as a whole (about 70% of the countywide rate of increase). Since the study area is more established and developed, new developments are expected to be extensions of, or contiguous to, existing development (i.e. “infill development”).

Shopping centers and other commercial establishments within, and outside of, the study area currently satisfy area demand for retail and other commercial services. Vacant commercially planned and zoned land can accommodate short-term future commercial development needs. In many instances, viable residential neighborhoods in the study area are located near existing or potential non-residential development sites.

The pending Route 288 extension will provide more convenient access to Goochland County and the west side of Henrico County from Chesterfield County. This major transportation improvement may further regionalize office and commercial land uses. For example, the new highway will provide more convenient access to the Short Pump Town Center super-regional shopping center in Henrico County and emerging employment centers in the West I-64/Broad Street corridor. It is not clear at this time if improved regional access will decrease or change the nature of demands for new commercial and office land uses.

Development Potential**Estimated New Development Potential In Study Area**

Land Use	Existing	Undeveloped Potential	Potential Increase (percentage)	Projected Demand Per Year	Land Supply (years)
Residential (units)	30,868	8,851	29%	549	16
Office (square feet)	6,065,456	5,366,956	88%	81,124	66
Commercial (square feet)	12,160,965	2,143,224	18%	374,509	6
Industrial (square feet)	505,355	7,144,246	1413%	25,067	285

Note: development potential in the above table is estimated by dividing the total development potential in each land use category by a projected rate of development (the yearly average rate of development from 1993 through 2002).

Residential Development Potential: At the end of 2002, there were 30,868 housing units in the study area. Current adopted zoning and land use plans in the study area would support an increase of 8,851 housing units, or 29% additional units. At recent rates of development (an average of 549 units per year), there is a potential 16-year supply of land for new residential development in the study area. At the end of 2002, there were approximately 740 approved tentative subdivision lots in the study area. This represented about one tenth of the total number of approved tentative subdivision lots countywide. Most tentative lots are located in the west part of the study area.

Office Development Potential: The study area has approximately 6.1 million square feet of office land uses, with the zoned and/or planned potential for an additional 5.4 million square feet of office space (an increase of 89%). This growth potential would equal a 66-year land supply, based on recent development trends (approximately 81,000 square feet per year). It should also be noted that office land uses are permitted in most commercial zone districts, so the actual development potential for offices uses could be significantly higher than noted above.

Commercial Development Potential: The study area has approximately 12.2 million square feet of commercial land uses, with a zoned and/or planned potential for an additional 2.1 million square feet of commercial building space (an increase of 18%). This growth potential is equal to a six-year land supply, based on recent development trends (375,000 square feet per year – roughly equivalent to the combined building area of one WalMart, one Sams Club, and one Home Depot store).

Industrial Development Potential: The study area has approximately one half million square feet of industrial land uses, with the zoned and/or planned potential for an additional 7.1 million square feet of industrial building space (an increase of 1413%). This growth potential is equal to a 285-year land supply, based on recent development trends (approximately 25,000 square feet per year). In addition, within five miles of the study area, there is sufficient land planned and/or zoned for an additional 17 million square feet of industrial development (in places such as the Route 288/Route 60 interchange and the Airport industrial park). It should be noted, however, that industrial zones allow certain commercial uses. As a result, the industrial development potential discussed above could be decreased by future commercial development within industrial zones.

The existing road network provides enhanced access to retail services and jobs for study area residents, and enhanced access for businesses to community, regional, and national markets. Ultimately, development potential will be significantly affected by market forces and the supply/demand of developable land within the region. These factors are difficult to predict, especially over the long time period of a comprehensive land use plan. At a minimum, the land supply for major land use categories appears to be sufficient to meet recent demand levels for residential land uses for the next 10 to 15 years. There is a limited supply of land for new commercial development in the study area (about six years).

There is an abundance of zoned and/or planned land for office and industrial development in the study area – a supply adequate for the very long-term (over 50 years).

New Public Facilities: The Public Facilities Plan examines the generalized needs (timing and location) of future public facilities such as schools and parks. The Public Facilities Plan recommendations would require an estimated 445 acres of new land area in the study area. This is equivalent to approximately 6.6% of the existing vacant land in the study area.

Study Area Zoning Activity: January 1993 through October 2003

Analysis of past zoning activity is one way to anticipate future demand for residential, office, commercial and industrial zoning and land uses within the study area. Specifically, land is typically rezoned with an expectation, on the part of the owner/developer, that it can be developed in the near future for uses within the new zoning category.

Study Area Zoning Activity (1993 through October 2003)

Type of Zoning Activity	Acres	Total Acres
Rezoning from Agricultural to Residential Classifications	1,456	1,456
Rezoning from Agricultural to Commercial Classifications	248	559
Rezoning from Residential to Commercial Classifications	173	
Rezoning from Office to Commercial Classifications	90	
Rezoning from Industrial to Commercial Classifications	48	
Rezoning from Agricultural to Office Classifications	57	70
Rezoning from Residential to Office Classifications	13	
Rezoning from Agricultural to Industrial Classifications	144	144

Note: Conditional use zoning activity, whereby land uses not normally allowed in a zoning district may be conditionally allowed, was not considered for the analysis. Figures are approximate.

Zoning activity in the study area since 1993 has significantly increased the inventory of zoned land for residential, commercial, and industrial land uses, and has decreased the amount of land zoned for agricultural land uses.

Net Study Area Zoning Changes (1993 through October 2003)

Zoning Category	Acreage Change	% Change	Current Acres
Residential	+ 1,270	+ 8%	18,911
Commercial	+ 559	+ 31%	2,348
Industrial	+ 96	+ 11%	1,007
Office	- 20	- 3%	799
Agricultural	- 1,905	- 26%	5,414

A review of zoning activity in the study area since 1993 indicates that demand for residential and commercially zoned land has been strong. There have also been recent demands for increased industrially zoned land. There appears to be no demand for additional land zoned for agricultural uses in the study area, since this sector has seen a significant decrease in acreage in the past decade.

Land Use Analysis: Study Area Development Activity

Another way to anticipate future demand for residential, office, commercial and industrial zoning and land uses is to examine development activity in recent years. The influx of new families into the area and the development of new housing units in subdivisions and apartment complexes suggest a continued demand for residential land uses. Site plan approvals for offices, businesses, and manufacturing facilities suggest continued demand for office, commercial and industrial land uses. Projected population growth in and around the study area can also suggest future demand for housing, jobs, services, and commercial facilities.

Residential Development

An estimated 5,493 new housing units were built in the study area from 1993 through 2002. Most new residential growth has been single-family. However, the rate of increase of multi-family residential units (an average 2.7% per year over the past decade) has been greater than the rate of increase of single-family units (2.1% per year over the past decade). At this point, the study area and the county as a whole have equivalent percentages of multi-family housing units (16%).

Single-Family: From January 1993 to December 2002 there was an increase of 4,428 single-family residences (in subdivisions and in acreage parcels) in the study area. This represents a 21% increase. During the same time period, single-family units countywide increased by 27%. According to the 2003 Residential Report, the study area had an inventory of about 2,224 undeveloped lots in recorded and tentatively approved subdivisions (approximately 7% of all lots within the study area). For the same year, the county as a whole had an inventory of 13,958 undeveloped lots (approximately 15% of all county lots).

Multi-Family: Between January 1993 and December 2002 there was an increase of 1,065 multi-family housing units (apartments, townhouses, condos and duplexes) within the study area -- an increase of 24%. The countywide rate of increase during the same time period was slightly higher (27%) than the study area.

Mobile Homes: There are two mobile home parks in the study area: Suburban Mobile Village (built in 1965 and expanded by 36 lots in 1998) and El Rancho (built in 1970). These parks have a total of 278 units, which is 13% of the total countywide number of mobile homes.

Office Development

In the past 20 years, most major office zoning and development activity (office park use) has occurred in the northern and western portions of the county, along Midlothian Turnpike and the Route 288 corridor. The study area has 70% of total new office space built in the county between 1993 and 2002. Approximately 811,000 square feet of office space (70% of the countywide total) was developed on 194 acres in the study area between 1993 and 2002. At the same time, land zoned for office uses in the study area declined slightly, by 20 acres.

The study area has been the center for countywide office development over the past decade. There is a robust, 66-year supply of land zoned and/or planned for future office land uses. Additionally, since office land uses are permitted in commercial zoning categories, the development potential for new office land uses is much higher. The study area's central location, high population density, land availability, and established transportation network should ensure that it remains viable for future office development.

Commercial Development (Map H)

As noted in the Zoning Activity section of this report, the study area experienced a net increase of 559 acres of commercially zoned land since 1993. In addition, approximately 3.7 million square feet (36% of the countywide total) of new commercial land uses has been built in the study area since 1993. The following discussion examines recent commercial development by major commercial subcategories. *Note: site inspections of shopping centers for vacancy and site maintenance were conducted during November and December 2003.*

Convenience Centers: Convenience shopping centers have less than 30,000 square feet of building area and do not have a sizeable chain anchor tenant. These shopping centers usually contain small, locally owned stores, and have a two-mile trade area radius.

There are four convenience centers in the study area, compared to 19 convenience centers in the county. Convenience centers in the study area have approximately 88,000 square feet of building area and 13 acres of land area. One study area convenience center has been built since 1993, compared to two convenience centers built countywide. Field inspection suggests that most of the convenience shopping centers are healthy, with low vacancy rates (except for a few vacancies in the Midlothian Green shopping center). These centers typically have well-maintained buildings, parking areas and landscaped areas.

Neighborhood Centers: Neighborhood shopping centers range in size from 30,000 to 100,000 square feet, and typically consist of one chain grocery store with a few smaller stores. Neighborhood centers have a three-mile trade area radius. There are 21 neighborhood centers in the study area, compared to 40 centers countywide. Neighborhood centers in the study area have approximately 1.3 million square feet of building area and 182 acres of land area. One neighborhood center has been built since 1993 in the study area, compared to three neighborhood centers built countywide. Field inspection suggests that most neighborhood centers are healthy, with low vacancy rates and well-maintained buildings, parking areas, and landscaped areas. Three existing neighborhood centers in the eastern Midlothian area had notable vacancies: Midlothian Market shopping center (major anchor spaces were vacant), Buford Court Commons, and Arch Village.

Community Centers: Community shopping centers have greater varieties of goods compared to neighborhood centers. Community centers usually have at least two large anchors, such as a grocery store, clothing store, or other larger general-merchandising store, as well as multiple out parcels consisting of restaurants, banks, and other smaller uses. Community centers range in size from 100,000 to 350,000 square feet, and have a trade area radius of four to five miles. There are 11 community centers in the study area compared to 20 countywide. Community centers in the study area have approximately two million square feet of building space and 236 acres of land area. None of the three community centers built countywide since 1993 is located in the study area. Field inspection suggests that about half of the community shopping centers have low vacancy rates, and well-maintained buildings, parking areas, and landscaped areas. High vacancy levels were observed at Victorian Square and Oxbridge Square in the Hull Street corridor, and at Chippenham Square and Beaufont Mall in eastern Midlothian. Pocono Crossing shopping center had one anchor shop under construction.

Power Centers: Power shopping centers are a newer trend in shopping-center development. They usually have at least three category-dominant anchors, and relatively few small shops. Power centers range in size from 250,000 to 600,000 square feet, and have a trade area radius of seven to eight miles. Three of the four existing power centers in the county are located in the study area. Power centers in the study area have approximately 1.1 million square feet of building space and 105 acres of land area. All power centers in the county and the study area were built after 1993. Field inspection suggests that existing power centers are healthy, with low vacancy rates and well-maintained buildings, parking areas, and landscaped areas.

Regional Centers: Regional shopping centers most often take the form of enclosed shopping malls. They have at least two major anchors, consisting of full-line department stores, general merchandise stores, or clothing stores. Regional shopping centers range in size between 400,000 and 800,000 square feet, and have a trade area radius of about ten miles. There is only one regional center in the study area and the county: Cloverleaf Mall. This mall has approximately 808,000 square feet of building space located on 65 acres. This center was built in 1972 and is now exhibiting symptoms of declining retail viability. All major anchors of this mall have closed and only a few small retail shops are left. As a point of comparison, the recently opened Stoney Point Fashion Park in Richmond is classified as a regional center.

Super Regional Centers: Super regional shopping centers are the largest and most intensive type of shopping center development. They are very similar to regional centers, but have many more stores and anchors. Super-regional centers usually exceed 800,000 square feet of building space, and have a trade area radius of about 15 miles. Chesterfield County's only super-regional center (Chesterfield Towne Center) is located in the study area. This center has approximately 1.1 million square feet of building space on 74 acres. This center was built in 1976 and was significantly expanded in 1987, 1995 (Sears), and 2000 (JC Penney). This center currently maintains a healthy mix of commercial uses. As a point of comparison, the recently opened Short Pump Town Center in Henrico County is classified as a super-regional center.

The demand for additional shopping center space in the future will likely be tied to market area growth. Different types of shopping centers have unique trade areas from which they draw customers. While many of the services provided by various types of centers do not translate into competition between types, some services do. In addition, centers with overlapping trade areas often compete for the same markets.

At present, the study area seems to be well-served by various types of shopping centers, except for a small area in the northwestern part of the study area, south of James River. This area is not within the trade area of existing neighborhood shopping centers. Also, various parts of the study area are not located in the trade areas of existing convenience shopping centers. It should be noted, however, that these areas are served by existing neighborhood centers offering larger stores and a wider range of goods compared to convenience centers.

Increases in population within the market areas of potential shopping center sites generate most new demand for additional shopping center space. Other factors affecting the demand for additional shopping center space includes market competition (both in and out of the study area), and anticipated area industrial employment. Existing and future shopping center development outside the study area could lower the future demand for shopping center space in the study area, through competition for the same markets.

Conversely, increases in population and industrial employment from new industrial development within or near to the study area could have a positive impact: significant amounts of retail sales would be generated by new area residents as well as by employees who live outside the market area but who shop within the area on their way to and from work. The location of any new shopping center(s) within the study area would also be influenced by: the availability of suitably zoned land; parcel size, configuration, access and visibility; and environmental constraints such as floodplains and wetlands, and by guidelines for desirable land use patterns as embodied in the Comprehensive Plan. The current Plans for the study area encourage shopping center development within various commercial strips and nodes.

Freestanding Commercial: In addition to existing shopping centers, commercial development within the study area is characterized by freestanding commercial uses along Midlothian Turnpike, Hull Street Road, and near the Midlothian Turnpike/Huguenot Road intersection. Freestanding commercial development includes: retail and convenience stores; contractors' offices, shops and storage yards; automobile dealerships; auto sales/service/repair stations; personal services and professional offices; restaurants, fast foods, hotels; office warehouses; recreational establishments; a hospital, and other uses. About 34% of these study area uses (approximately 3.8 million square feet of building area) has been built since 1993.

The demand for additional freestanding commercial space is determined in part by the type of use occupying the site. Some freestanding uses, such as department and discount stores, have market areas similar to community scale shopping centers. Other uses, such as home centers and automobile sales, draw from larger areas (such as the entire county and the larger Richmond metro area). Other freestanding commercial uses, such as convenience stores, fast food restaurants and automobile service stations, depend on traffic generated by other uses, such as nearby shopping centers and employment centers, and on commuter traffic passing through the study area. The location of any new freestanding commercial space would also be influenced by the availability of suitably zoned land; parcel size, configuration, access and visibility; and environmental constraints such as floodplains and wetlands.

Commercial Demand Conclusions: The study area has an estimated 147 square feet of commercial building space per capita. The remainder of the county has approximately 47 square feet of commercial building space per capita. Clearly, the study area is the predominant county commercial center. Commercial zoning and development activity, both within the study area and surrounding geography, appears to be healthy, with generally low levels of commercial vacancies in most shopping centers and freestanding retail businesses. The need for future increased commercial space is expected to (at a minimum) mirror projected population, traffic, and job growth within the study area. The potential effects of Route 288 improvements on commercial development activity within the study area are not known at this time.

Population in the study area is projected to increase by approximately 15% by the year 2022, to 95,000 persons.

Current estimates indicate that the study area has approximately 1,722 acres of commercially developed land (not including office uses) within the study area. Approximately 2,348 acres of commercially zoned land is located in the study area. 625 acres of commercially zoned land in the study area is vacant. Assuming that existing commercial establishments satisfy existing population demands and that future demand for commercial development would increase proportionally with population growth, the study area could ultimately support an additional 360 acres of commercial development by the year 2023. Based on commercial zoning activity in the past 10 years (which has increased commercial zoned land by approximately 3.1% per year on average – exceeding the rate of population growth), the study area could need 1,118 acres of commercially zoned land by the year 2023.

While competition from existing commercial development from within and outside the study area would capture some of this commercial development potential, new commercial development could be accommodated in the short-term on existing commercially zoned lands along major commercial corridors and at infill locations within the study area. In the long-term, the study area does not have commercially zoned or designated land to support continued commercial development consistent with recent demand levels (either in terms of actual construction or rezoning activity).

It should be noted that this analysis projects future commercial development demand based on recent development activity and population growth within the study area.

This approach assumes that other factors such as competition, area employment, and market-wide retail and development patterns, remain constant. Further refinements in estimating future demand for commercial zoning and land use within the study area would require market analyses for various commercial categories (restaurant, convenience sales, vehicle sales and service, contractor offices and showrooms, personal services, medical offices, etc.). Such analyses would require detailed estimates of:

- Market areas for each category
- Future population increases within each category's market area
- The population required to support uses within each category
- Potential competition, both within and outside of the study area
- Typical development densities for each category
- Future area job growth from employment center development
- Household income levels

Within the scope of this land use plan amendment such analyses would be further complicated, since the nature of a land use plan amendment is to examine area-wide rather than parcel-specific factors. The development potential of existing vacant commercially zoned land within the study area could be affected by physical constraints such as parcel size and configuration, access, visibility, and by environmental constraints such as floodplains and wetlands. Given these factors, the inventory of commercially zoned vacant land suitable for development in the study area is most likely less than 625 acres. Market forces (such as location, supply, demand and competition) would influence the commercial viability of existing zoned sites, as well as any lands that the Plan might suggest are appropriate for such uses based on established zoning and land use guidelines. The Plan could account for these factors and suggest appropriate, alternate sites for commercial zoning and land uses, and suggest more land for commercial development than might be developed based on projected market demand alone.

Hotel/Motel Development

Chesterfield County has 35 hotels/motels, 16 of which are located in the study area (along Midlothian Turnpike and at the intersection of Hull Street Road and Courthouse Roads). Recent development activity in the study area indicates potential continued demand for additional hotels/motels in and around the study area. Half of the hotels/motels in the study area were built after 1993. Completion of the planned improvements of Route 288 may increase potential demand for new hotels/motels serving highway interchanges.

Current estimates indicate that there is approximately 740,000 square feet of hotel/motel building space on 44 acres within the study area.

If the amount of hotel/motel space grows proportionate to population growth, and additional 113,000 additional square feet of hotel/motel space on approximately seven acres will be needed by 2022. Hotel/motel development activity, both within the study area and surrounding geography, appears to be healthy. The need for future increased hotel/motel space may mirror projected increase in population, traffic and jobs within the study area.

The demand for additional hotel/motel construction within the study area will depend on the completion of the planned improvements to Route 288 and on development of new employment centers. The location of new hotels or motels would also be influenced by the availability of suitably zoned land; parcel size, configuration, access and visibility; and environmental constraints such as floodplains and wetlands.

Industrial Development

Most existing industrial zoning and land uses in the study area are located between Hull Street Road and Powhite Parkway, along Route 288 and Genito Road. As noted in the Zoning Activity section of this report, the study area has gained 96 acres of industrially zoned land since 1993. Industrially zoned land comprises about 4% of zoned land in the study area, or about 1,007 acres. Of this total, 395 acres have been developed -- 206 acres have been developed for industrial uses (primarily for storage and office warehouses, which occupy about 82 and 55 acres respectively).

Recent industrial development and zoning activity in the study area indicate continued modest development potential for industrial uses in and around the study area. Approximately 251,000 square feet of industrial building space on 60 acres has been developed since 1993 (all after the year 2000). The demand for additional industrial developments in the study area could depend on the completion of the planned improvements of Route 288 and location of its supporting uses. Current Plans for the study area suggest that industrial and other employment generating development would be appropriate within and outside the study area to provide jobs to current and future residents, increase the county's industrial tax base, and promote industrial development. In particular, the current Powhite/Rt. 288 Development Area Plan identifies areas between Hull Street Road and Powhite Parkway along Rt. 288 and Genito Road, as prime locations for industrial development.